Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4204/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **AustSand Mining**

1.3. Property details

Property: Mining Lease 70/793
Local Government Area: Shire of Albany
Colloquial name: Mindijup Silica Sand Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.2		Mechanical Removal	Mineral Production

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 March 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The vegetation of the application area is broadly mapped as Beard vegetation association 979: Mosaic: Medium forest; jarrah-marri / Low forest; jarrah & casuarina (probably *Allocasuarina fraseriana*) (GIS Database).

GHD Pty Ltd (2011) conducted a flora and vegetation survey over the application and identified one vegetation type:

- Very Open Woodland to Low Open Woodland of *Eucalyptus staeri* over *Banksia attenuata, Allocasuarina fraseriana*, over open Shrubland to Closed Heath of *Jacksonia spinosa, Agonis theiformis, Melaleuca thymoides* over Low Shrubland to Low Closed Heath of *Leucopogon cucullata, Leucopogon* sp., *Andersonia caerulea*, *Xanthosia rotundifolia* over Sedgeland of *Anarthria scabra, Hypolaena exsulca* (GHD Pty Ltd, 2011).

The vegetation under application has previously been cleared (2005) and consists of regrowth, mainly from the shrub and understorey species (GHD Pty Ltd, 2011).

Clearing Description AustSand Mining has applied for an area permit to clear up to 2.2 hectares of native vegetation. The application area is located immediately adjacent to an existing sand mine and consists of regrowth vegetation.

Clearing is proposed to be undertaken using a bulldozer with a rake on the front for the purpose of extracting silica sands (GHD Pty Ltd, 2011). The vegetation will be stockpiled on the boundary of the cleared area and will be respread over rehabilitated area (GHD Pty Ltd, 2011).

Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

Comment The vegetation condition was derived from a flora and vegetation survey conducted by GHD Pty Ltd (2011).

The application area has been previously cleared in 2005, however the topsoil was not stripped and the majority of regrowth has occurred from the shrub and understorey species (GHD Pty Ltd, 2011). The vegetation of the application area is considered to be in 'Good Condition'.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal may be at variance to this Principle

The application area is located approximately 30 kilometres north-east of Albany within the Southern Jarrah

Forest subregion of the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The vegetation of this subregion is characterised by Jarrah - Marri forest in the west grading to Marri and Wandoo woodlands in the east. There are extensive areas of swamp vegetation in the south-east, dominated by Paperbarks and Swamp Yate. The understory component of the forest and woodland reflects the more mesic nature of this area. The majority of the diversity in the communities occurs on the lower slopes or near granite soils where there are rapid changes in site conditions (CALM, 2002).

The south coast area of Western Australia is one of the few global regions featuring exceptional concentrations of endemic species and experiencing exceptional loss of habitat (City of Albany, 2010). The high levels of biodiversity in the region are partially due to the Biogeographical complexity of the region and the geological and climate history (City of Albany, 2010).

The vegetation within the City of Albany boundary can be described as consisting of severely dissected remnants along the central plain (the application area) and large continuous upland and coastal blocks (Connell and ATA Environmental, 2001). The City of Albany retains approximately 37.41% of its pre-European vegetation cover (Shepherd, 2009), which places it at 'Depleted' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

In a local context (1:25,000 scale), aerial photography indicates that approximately 60% of the landscape is under vegetation with the remaining 40% cleared land for agriculture (GIS Database). However, approximately 35% of this vegetation is native, with the other 25% consisting of plantation vegetation (GIS Database) i.e. Tasmanian Blue Gum. Much of the native vegetation is composed of small fragments (GIS Database), which due to their isolation are likely to be degraded with reduced biodiversity (EPA, 2000). Given that the vegetation of the application area is a part of a large stand of native vegetation it is likely that it contains a high level of biodiversity in comparison to other vegetation stands in the local area.

A flora and vegetation survey conducted by GHD Pty Ltd (2011) undertaken in January 2011 identified a total of 52 flora taxa within the application area. This included two individuals of the Priority 3 flora species *Petrophile longifolia* (Long Leaved Cone Bush). GHD Pty Ltd (2011) has stated this indicates a medium level of biodiversity. This postulation has most likely been made in relation to a region context, where the vegetation is compared to other stands of similar vegetation condition and size. However, in a local context, due to the high levels of clearing for agriculture and the fragmented nature of most other areas of native vegetation, the vegetation of the application area could be judged as comprising high biodiversity.

The Western Australian South Coast Macro Corridor Network identified 21 potential vegetation corridors that could be defined as macro corridors, all of which have regional nature conservation significance and strategic special significance within the south coast region (Wilkins et al., 2006). Vegetation corridors were prioritised according to predicted nature conservation values at a landscape scale. The native vegetation within the application area is within the junction of the Kalgan River corridor and the Porongurup Range corridor, which are both listed as 'very high priority' (Links two or more very high nature conservation value areas). The application area is also within 'Strategic Zone A' of the macro corridor network, which has been defined as: 'contains areas of woody vegetation where polygons greater than 30 hectares in size are spaced less than 1 kilometre apart and potentially form the most strategic link between major protected areas' (Wilkins et al., 2006). Therefore, the application area is a part of a relatively continuous chain of vegetation linking important conservation areas. These corridors are involved in allowing the flow of biodiversity throughout the south coast area (Wilkins et al., 2006).

The vegetation under application is located immediately adjacent to an existing sand mine. The vegetation has previously been cleared (2005) and consists of regrowth, mainly from the shrub and understorey species (GHD Pty Ltd, 2011). A small number of overstorey species are present within the application area, with four individuals of *Banksia attenuata*, one individual of *Banksia ilicifolia*, and occasional individuals of *Eucalyptus staeri* and *Allocasuarina fraseriana* (GHD Pty Ltd, 2011). The vegetation of the application area is part of a relatively large stand of native vegetation (approximately 350 hectares). This stand of vegetation is the largest intact portion of Beard vegetation association 979 in the State (GIS Database). A flora report conducted by GHD Pty Ltd (2011) judged the vegetation to be in 'Good Condition' in accordance with the Keighery (1994) rating scale. Most other stands of Beard vegetation association 979 are small and highly fragmented (GIS Database). It is likely that the vegetation of the application area is not in as good condition as the remainder of the larger remnant it forms part of, but is likely to be in better condition than other stands of this vegetation type in the local and regional area.

Opportunistic fauna records of the application and surrounding area have recorded 26 species of vertebrate fauna within the area, of which three were mammals, four were reptiles, two were amphibians, and 17 were birds - including the conservation significant Baudin's Black Cockatoo (*Calyptorhynchus baudinii*) (GHD Pty Ltd, 2011). Fauna diversity of the remnant within which the application area is situated is likely to be high at a local level due to its importance as a corridor and the relatively large size of the remnant within an extensively cleared area. However, the application area has suffered previous disturbance (cleared in 2005) and is located adjacent to an existing sand mine. Therefore, the application area is likely to be of lower habitat value than the surrounding areas.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology

CALM (2002)
City of Albany (2010)
Connell and ATA Environmental (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
GHD Pty Ltd (2011)
Keighery (1994)
Shepherd (2009)
Wilkins et al. (2006)
GIS Database:
- Albany Mount Barker 1.4m Orthomosaic 2002
- IBRA WA (Regions - subregions)
- NLWRA, Current Extent of Native Vegetation
- Pre-European Vegetation
- Towns

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal may be at variance to this Principle

GHD Pty Ltd (2011) conducted Level 1 reconnaissance fauna surveys of the application area on 18 October 2006, 29 October 2007 and 11 November 2009.

The application area is located on high ground and the intact habitat comprises Very Open *Eucalyptus* and *Banksia* Low Woodland over Open Shrubland over Low Shrubland to Low Closed Heath over Sedgeland on sand (GHD Pty Ltd, 2011).

The presence of *Banksia* species indicates that the vegetation of the application area may be suitable foraging habitat for Black Cockatoo species. Baudin's Black Cockatoo (*Calyptorhynchus baudinii*) have been recorded within the application area (GHD Pty Ltd, 2011). Searches of relevant Fauna Databases also indicate that Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) is likely to occur within the application area (GHD Pty Ltd, 2011).These species are respectively listed as 'Vulnerable' and 'Endangered' under the *Environment Protection and Biodiversity Conservation Act 1999* and Schedule 1 under the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2).* It is unlikely that there are any nesting sites for Black Cockatoos within the application area as there are no trees older than 5 years due to the vegetation being regrowth following clearing undertaken in 2005 (GHD Pty Ltd, 2011). The native vegetation surrounding the application area contains a number of *Banksia* plants and is likely to be suitable foraging habitat.

The Western Australian South Coast Macro Corridor Network identified 21 potential vegetation corridors that could be defined as macro corridors, all of which have regional nature conservation significance and strategic special significance within the south coast region (Wilkins et al., 2006). Vegetation corridors were prioritised according to predicted nature conservation values at a landscape scale. The native vegetation within the application area is within the junction of the Kalgan River corridor and the Porongurup Range corridor, which are both listed as 'very high priority' (Links two or more very high nature conservation value areas). The application area is also with 'Strategic Zone A' of the macro corridor network, which has been defined as: 'contains areas of woody vegetation where polygons greater than 30 hectares in size are spaced less than 1 kilometre apart and potentially form the most strategic link between major protected areas' (Wilkins et al., 2006). Therefore, the application area is a part of a relatively continuous chain of vegetation linking important conservation areas. As the vegetation of the application area forms a part of a corridor for fauna movements it may be considered significant habitat for fauna indigenous to Western Australia.

However, the application area is likely to be of lower habitat value than the surrounding areas as it is regrowth vegetation approximately 5 years old. The application area has also suffered previous disturbance (cleared in 2005) and is located adjacent to an existing sand mine.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology

GHD Pty Ltd (2011)
Wilkins et al. (2006)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposal is not likely to be at variance to this Principle

According to available GIS databases there are no known records of Declared Rare Flora (DRF) within the application area (GIS Database).

A flora survey was conducted over the application area by staff from GHD Pty Ltd on 12 January 2011 (GHD Pty Ltd, 2011). No DRF species were recorded within the application area (GHD Pty Ltd, 2011).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GHD Pty Ltd (2011)
GIS Database:
- Declared Rare and Priority Flora List

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not likely to be at variance to this Principle**
A search of available databases reveals that there are no Threatened Ecological Communities (TECs) within the application area (GIS Database).

The nearest TEC is located approximately 43 kilometres north-north east of the application area (GIS Database). At this distance there is little likelihood the application area is necessary for the maintenance of the TEC.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Threatened Ecological Sites Buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposal may be at variance to this Principle**
The application area is within the Interim Biogeographic Regionalisation of Australia (IBRA) Jarrah Forest bioregion (GIS Database). According to Shepherd (2009) there is approximately 55.8% of the pre-European vegetation remaining in the Jarrah Forest bioregion which places it as 'Least Concern' according to the Department of Natural Resources and Environment (2002).

The application area falls within the City of Albany (GIS Database). The City of Albany is within the Intensive Land Use Zone of the south-west of Western Australia which has been largely cleared. Approximately 37.41% of the pre-European vegetation extent remains within the City of Albany (Shepherd, 2009). This places the City of Albany at 'Depleted' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The application area is broadly mapped as Beard vegetation association 979 (GIS Database). There is approximately 18.5% of the pre-European vegetation remaining of Beard vegetation association 979 in the State, bioregion and subregion (Shepherd, 2009). This vegetation type is not represented in International Union for Conservation of Nature (IUCN) Class I-IV Reserves within the State (refer to table below). This places this vegetation type at 'Vulnerable' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

According to a vegetation survey undertaken by GHD Pty Ltd (2011) on 12 January 2011, the vegetation of the application area does not match the description of Beard vegetation association 979 accurately despite being mapped as such in 1979. GHD Pty Ltd (2011) state that two of the key components of Beard vegetation association 979 were not recorded as being present within the application area. Furthermore the key overstorey species of the application area (*Eucalyptus staeri* and *Banksia attenuata*), are not described by Beard (1979) as being present in vegetation association 979. According to GHD Pty Ltd (2011) the vegetation of the application area is more aligned with Beard vegetation association 978 - Low forest; jarrah, *Eucalyptus staeri* and *Allocasuarina fraseriana*.

A broad examination of the remnant vegetation mapped as Beard vegetation association 979 was conducted by a qualified GHD botanist in October 2010 (GHD Pty Ltd, 2011). According to this examination, the pure white sand of the application area is representative of wind-blown Aeolian inland sand dunes/patches and its vegetation is much more aligned with that of the poor coastal soils found in Beard vegetation associations 978 (GHD Pty Ltd, 2011).

There is approximately 38.9% of the pre-European vegetation remaining of Beard vegetation association 978 in the State, bioregion and subregion (Shepherd, 2009). Approximately 9.08% of this vegetation type is represented in International Union for Conservation of Nature (IUCN) Class I-IV Reserves within the State (refer to table below). This places this vegetation type at 'Depleted' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002). The National Objective and targets for Biodiversity Conservation recognise target retention of 30% or more of the pre-1750 clearing extent of each ecological community (Department of Environment and Heritage, 2001). Below this threshold species extinction is believed to occur exponentially at an ecosystem level (EPA, 2000).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)
IBRA Bioregion - Jarrah Forest	4,506,656	2,514,550	~55.8%	Least Concern	~14.04% (~24.72%)
IBRA Subregion - Southern Jarrah Forest	2,607,876	1,356,651	~52.02%	Least Concern	~16.95% (~31.85%)
Local Government - Albany	431,375	161,375	~37.41%	Depleted	~8.49% (~20.84%)
Beard vegetation associations - State					
978	53,231	20,730	~38.94%	Depleted	~9.08% (~22.90%)
979	7,723	1,430	~18.51%	Vulnerable	No information available
Beard vegetation associations - Bioregion					
978	53,017	20,626	~38.90%	Depleted	~9.08% (~22.93%)
979	7,723	1,430	~18.51%	Vulnerable	No information available
Beard vegetation associations - subregion					
978	53,017	20,626	~38.90%	Depleted	~9.08% (~22.93%)
979	7,723	1,430	~18.51%	Vulnerable	No information available

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct	Probably no longer present in the bioregion
Endangered*	<10% of pre-European extent remains
Vulnerable*	10-30% of pre-European extent exists
Depleted*	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

* or a combination of depletion, loss of quality, current threats and rarity gives a comparable status

The application area is located within a part of a relatively large stand of native vegetation (approximately 350 hectares). This stand of vegetation is the largest intact portion of Beard vegetation association 979 in the State (GIS Database). A flora report conducted by GHD Pty Ltd (2011) judged the vegetation to be in 'Good Condition' in accordance with the Keighery (1994) rating scale. Most other stands of Beard vegetation association 979 are small and highly fragmented (GIS Database). As the application area consists of regrowth vegetation, it is likely that the vegetation of the application area is not in as good condition as the remainder of the larger remnant it forms part of, but is likely to be in better condition than other stands of this vegetation type in the local and regional area.

In a local context (1:25,000 scale), aerial photography indicates that approximately 60% of the landscape is under vegetation with the remaining 40% cleared land for agriculture (GIS Database). However, approximately 35% of this vegetation is native, with the other 25% consisting of plantation vegetation (GIS Database) i.e. Tasmanian Blue Gum. Much of the native vegetation is composed of small fragments (GIS Database), which due to their isolation are likely to be degraded with reduced biodiversity (EPA, 2000). Although the application area forms part of a larger stand of native vegetation, it consists of regrowth vegetation approximately 5 years old.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology

Beard (1979)
Department of Environment and Heritage (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
GHD Pty Ltd (2011)
Keighery (1994)
Shepherd (2009)
GIS Database:

- Albany Mount Barker 1.4m Orthomosaic 2002
- IBRA WA (Regions Sub-regions)
- NLWRA, Current Extent of Native Vegetation
- Pre-European vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is not likely to be at variance to this Principle

According to available GIS Databases, there are no watercourses or wetlands within the application area (GIS Database).

The vegetation of the application area, as described by GHD Pty Ltd (2011), is not classed as riparian vegetation. The proposed clearing is not likely to impact on native vegetation growing in, or in association with, a watercourse or wetland.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

GHD Pty Ltd (2011)
GIS Database:
- Albany-Mt Barker 2002 1.4m Orthomosaic
- Geodata, Lakes
- Hydrography - Linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal is not likely to be at variance to this Principle

The proposed clearing of 2.2 hectares of native vegetation for the purpose of mineral production is not likely to cause appreciable land degradation. At the cessation of mineral production activities the mining lease conditions applied under the *Mining Act 1978* require the area to be rehabilitated back to native vegetation. This would reduce issues of prolonged land degradation through wind and water erosion.

There may be some loss of organic matter from the soil, however, upon rehabilitation these levels should recover.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal may be at variance to this Principle

The application area is located in proximity to a number of conservation areas:

- an unnamed Nature Reserve occurs approximately 2.8 kilometres east-north east of the application area;
- Granite Hill Nature Reserve occurs approximately 6.5 kilometres north of the application area;
- North Sister Nature Reserve occurs approximately 6.7 kilometres south-east of the application area;
- South Sister Nature Reserve occurs approximately 7 kilometres south-east of the application area;
- White Lake Nature Reserve occurs approximately 7.3 kilometres east of the application area;
- Takenup Road Nature Reserve occurs approximately 7.4 kilometres north-west of the application area;
- Napier Nature Reserve occurs approximately 8.6 kilometres west of the application area;
- Porongurup National Park is located approximately 13.7 kilometres to the north-west of the application area; and
- Stirling Range National Park is located approximately 32 kilometres to the north of the application area (GIS Database).

The application area is a part of a relatively large stand of native vegetation totalling approximately 350 hectares (GIS Database). This vegetation is likely to form part of an important link between the abovementioned nature reserves, allowing for the transition of flora and fauna between nature reserves. This can aid in the diversification of the nature reserves by allowing genes to be shared from reserve to reserve (Wilkins et al., 2006).

The Western Australian South Coast Macro Corridor Network identified 21 potential vegetation corridors that could be defined as macro corridors, all of which have regional nature conservation significance and strategic special significance within the south coast region (Wilkins et al., 2006). These were prioritised according to predicted nature conservation values at a landscape scale. The native vegetation within the application area is

within the junction of the Kalgan River corridor and the Porongurup Range corridor, which are both listed as 'very high priority' (Links two or more very high nature conservation value areas). The application area is also within 'Strategic Zone A' of the macro corridor network, which has been defined as: 'contains areas of woody vegetation where polygons greater than 30 hectares in size are spaced less than 1 kilometre apart and potentially form the most strategic link between major protected areas' (Wilkins et al., 2006). Therefore, the application area is a part of a relatively continuous chain of vegetation linking important conservation areas. As the vegetation of the application areas forms a part of an ecological corridor it may be important in the connectivity of the nature reserves.

However, the application area has suffered previous disturbance (cleared in 2005). Therefore, although there has already been extensive clearing at the site, with approximately 70 hectares of native vegetation having already been cleared at the Mindijup mine site (GIS Database), it is unlikely that the clearing of a further 2.2 hectares of regrowth vegetation would significantly reduce the connectivity of the vegetation in the local landscape.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology Wilkins et al. (2006)
GIS Database:
- Albany Mount Barker 1.4m Orthomosaic 2002
- DEC Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments **Proposal is not likely to be at variance to this Principle**
The application area is not within a Public Drinking Water Source Area (GIS Database) and therefore is unlikely to cause an incremental deterioration in the quality of water in any such areas.

There are no watercourses or water bodies within the application area (GIS Database). The Kalgan River occurs approximately 2.3 kilometres to the west-north west and a South Coast Significant Wetland occurs approximately 0.5 kilometres to the south-west of the application area (GIS Database). Due to the distance between the proposed clearing and these water bodies it is unlikely the clearing of native vegetation associated with this proposal will cause a deterioration in surface water quality.

Due to the relatively small size of the proposed clearing (2.2 hectares) in relation to the large size of the Oyster Harbour Kalgan King catchment (298,270 hectares) (GIS Database), it is unlikely the clearing associated with this proposal will cause a deterioration in ground water quality.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Hydrographic Catchments - Catchment
- Hydrography, Linear (Hierarchy)
- Public Drinking Water Source Areas (PDWSA)
- Southcoast Significant Wetlands

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposal is not likely to be at variance to this Principle**
Given the size of the proposed clearing (2.2 hectares) in relation to the large size of the Oyster Harbour Kalgan King catchment (298,270 hectares) (GIS Database), it is unlikely to cause an incremental rise in the frequency or duration of flooding. In addition, the application area has a slight relief with no wetlands or watercourses (GIS Database).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS database:
- Hydrography, linear
- Topographic Contours, Statewide

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There are two native title claims (WC96/109 and WC98/70) over the area under application (GIS Database). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no known Aboriginal sites of significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is noted that the proposed clearing may impact on a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) for environmental assessment under the EPBC Act. The proponent is advised to contact DSEWPaC for further information regarding notification and referral responsibilities under the EPBC Act.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 14 February 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

Methodology

GIS Database
- Aboriginal Sites of Significance
- Native Title NNTT

4. References

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5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)

IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1	**Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	**Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	**Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	**Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	**Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	**Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1	**Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
Schedule 2	**Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
Schedule 3	**Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
Schedule 4	**Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

P1	**Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P2	**Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P3	**Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P4	**Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
P5	**Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:

(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or

(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:

(a) is not critically endangered; and

(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:

(a) is not critically endangered or endangered; and

(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.